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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of : PATENT  
Michael KAMLEITER et al. : Confirmation No. 4931  
Serial No.: 10/582,349 : Art Unit: 1777  
Filed: January 8, 2008 : Examiner: K. S. Menon  
For: METHOD FOR PRODUCTION : Appeal No. \_\_\_\_\_  
OF TUBULAR MEMBRANES :

**APPELLANTS' REPLY BRIEF ON APPEAL UNDER 37 C.F.R. § 41.41**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

For the appeal to the Board of Patent Appeals and Interferences from the decision dated October 28, 2010 of the Primary Examiner twice and finally rejecting claims 10-14, 16-26 and 28-33 in connection with the above-identified application, Applicants-Appellants submit the following brief in accordance with 37 CFR § 41.41 and in response to the May 31, 2011 Examiner's Answer.

**Rejection Under 35 U.S.C. §112 Involves Misinterpretation of Claims 16 and 28**

In support of the current rejection under 35 U.S.C. § 112, first paragraph, of claims 16 and 28 as allegedly failing to provide enablement for the recitation of "graphite powder," for the first time the Examiner describes the claim as "reciting fibers consisting of . . . graphite powder"

on page 5, penultimate paragraph of the Examiner's Answer. This statement by the Examiner regarding the nature of claims 16 and 28 mischaracterizes the claim recitation. Each of claims 16 and 28 specifically recites "the threads are monofilaments or multifilaments of materials selected from the group consisting of . . . graphite powder . . ." as pertinent to this rejection. The claims then recite monofilaments or multifilaments of graphite powder or of the other listed materials, meaning that the monofilaments or multifilaments include graphite powder or the other listed materials. The recitation of "of materials" does not mean that monofilaments or multifilaments contain only or consist only of graphite powder or any of the other listed materials. The use of "consisting of" in these claims is merely to limit the Markush group, but does not require that the monofilaments or multifilaments be made exclusively of the materials of the Markush group.

Further, nothing in the record supports "the Examiner's understanding that making filaments from graphite power is extremely difficult, if not impossible." Thus, even based on the Examiner's incorrect interpretation of the claimed subject matter, the Examiner has failed to provide adequate evidence to support the rejection.

Thus, reversal of this rejection is requested.

Shintani Patent Threads Are Not Parallel to Longitudinal Axis of a Tubular Body

The Shintani patent does not teach forming a tubular membrane having a tubular body or a tubular membrane having a tubular body with fillet-shaped connecting lines of continuous longitudinal threads 14 parallel to the longitudinal axis of the tubular body, contrary to the new contentions in the Examiner's Answer. Thus, the Shintani patent cannot teach forming or providing that structure of claims 10 and 23 in the Ten Hove patent or the Stockwell patent.

Even if fibers F and G of the Shintani patent extend in the knit direction, such disclosure relative to the knit direction does not provide a teaching of a longitudinal direction parallel to the longitudinal axis of a tubular body, as claimed. Nothing in the Shintani patent is cited as specifically or inherently disclosing that the knit direction is the same direction as the longitudinal axis of the tubular body as recited in claims 10 and 23. Without any basis for correlating the Shintani knitting direction to the longitudinal axis of the tubular body renders the rejection insufficient and fails to provide a *prima facie* case of obviousness.

As clearly illustrated in the drawings of the Shintani patent, particularly those relied upon by the Examiner, the Shintani fibers B and F do not extend parallel to the knitting direction as alleged in the Examiner's Answer, but are at varying acute angles to the knitting direction. This failure to recognize the acute angular orientation further demonstrates that the rejection is untenable.

Contrary to the allegations contained on pages 12-14 of the Examiner's Answer, Fig. 1 of this application clearly shows threads 12 along the connecting lines 14. These threads are clearly parallel to the longitudinal axis of the tubular body. Any interpretation to the contrary misconstrues the subject matter of the specification and claims of this application. Thus, the lines 14 are also threads 12 as well as the center lines of the balls 22. They are not similar to the empty spaces in the drawings of the Shintani patent.

Relative to the arguments contained on page 15 of the Examiner's Answer, the threads F and B of the Shintani patent are clearly shown first extending in one direction and then in a generally opposite direction. No section of any of these threads extends parallel to a longitudinal axis of a tubular body, as recited in each claim pending in this application. Merely extending in

some manner in a knitting direction does not make those threads parallel to the longitudinal axis of a tubular body as recited in the claims.

Claim 23 Further Distinguishable by Threads Forming Planar Transverse Connections

Relative to the claim 23 recitation of forming at least some of the threads as planar transverse connections, the Examiner's Answer recites column 3, lines 9-14, of the Shintani patent as allegedly disclosing such a planar structure. However, the cited portion of the Shintani patent only refers to the sinker loops of the knitted loops being formed by one reed to become the ground stitch portion and the needle loops of the knitted loops and the chain portion formed by the other reed becoming the convex portion in the tricot knitted fabric. No analysis or reasons are provided as evidence that the Shintani membrane module has transverse threads that are planar, as claimed, contrary to the allegations contained at the top of page 16 of the Examiner's Answer.

In summary, since the Shintani patent does not teach the details of the claimed structure, it cannot render obvious the addition of the claim 10 or 23 structure to the Ten Hove patent or the Stockwell patent.

Claim 11

Relative to claim 11, the Examiner's Answer cites on page 17, column 3, lines 9-14 of the Shintani patent for the recited crocheting steps. However, such portions of the Shintani patent do not refer to crocheting needles or even hook needles. The Examiner bears the burden, not the Applicants, to show that the forming of stitches with a sinker loop and a needle loop require a hook needle as alleged in the Examiner's Answer. Since the Examiner has not carried the necessary burden, no adequate *prima facie* case of obviousness is established.

### Claim 12

Related to claim 12, in the Shintani patent, column 12, lines 9-13, are cited for the ground stitch portion having high permeability. However, no such high permeability is mentioned in the cited portion of the Shintani specification. Since high permeability is not mentioned in this portion, any interpretation based on that omission is unfounded.

### Claims 17 and 18

Relative to the limitations of claim 17, the Examiner states on the top of page 18 of the Examiner's Answer that the recited angle is not shown to have any criticality, relying on the Federal Circuit decision in *In re Gardner v. TEC Systems, Inc.* cited in the Examiner's Answer. However, that decision involved proof by the defendant, i.e., an alleged infringer asserting patent invalidity, that the claimed dimensions did not affect the operability of the device. No such similar showing has been made in this case to support the rejection.

### Claims 19 and 20

Relative to claims 19 and 20, page 18 of the Examiner's Answer merely states that the number of lines and surfaces depends on the diameter of the tube, how tight the items are, and the denier of the fibers. However, no analysis or evidence supports these conclusions. As such, they fail to present a *prima facie* case of obviousness.

### Rejection Over Stockwell Patent Alone

Regarding the rejection of claim 10 as being anticipated by the Stockwell patent, the Examiner's Answer states on pages 22-23 that the mere disclosure of "tricot" provides the claimed features. However, no analysis is set forth in the statement of the rejection or in the

arguments section of the Examiner's Answer to demonstrate how any tricot knit would, in fact, satisfy the limitations of claims 10 and 23. If reliance is made to the Shintani patent, the rejection cannot be one for anticipation under 35 U.S.C. § 102.

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The remaining arguments raised in the Examiner's Answer are adequately treated in the previously filed Brief on Appeal and are not repeated herein.

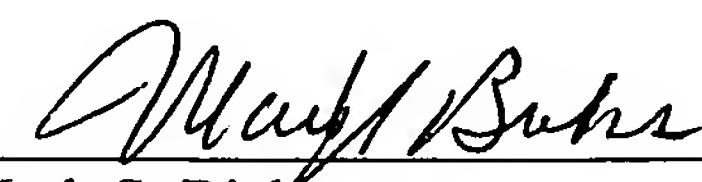
### Conclusion

In view of the foregoing and the Brief on Appeal, Applicants-Appellants submit that the rejections of the claims are untenable and request that such rejections be reversed.

### Submission of Corrected Appendix A – Copy of Claims on Appeal

In view of the typographical error noted in the Examiner's Answer, appended hereto is a corrected Appendix A reflecting the modified claims as set forth in the concurrently filed Amendment to correct the typographical errors in claims 22 and 23.

Respectfully submitted,

  
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Mark S. Bicks  
Reg. No. 28,770

Roylance, Abrams, Berdo & Goodman, LLP  
1300 19th Street, NW, Suite 600  
Washington, DC 20036  
(202) 659-9076

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CORRECTED APPENDIX A – COPY OF CLAIMS ON APPEAL



10. A method for producing membranes, comprising the steps of:

constructing a tubular body having a longitudinal axis from a plurality of threads such that some of the threads are tied substantially firmly together along fillet-shaped connecting lines with continuous longitudinal threads parallel to the longitudinal axis;

between the fillet-shaped connecting lines, forming at least some of the threads as planar transverse connections between mutually adjacent ones of the fillet-shaped connecting lines; and

applying a predefinable membrane material to the tubular body.

11. A method according to claim 10 wherein

the tubular body is constructed by a crocheting device, with each inserted thread being assigned a separate and respective hooked needle or crochet needle.

12. A method according to claim 11 wherein

the tubular body is constructed by crocheting with passages being formed between individual ones of the transverse connections for allowing liquid to pass through at high flow rates; and

the fillet-shaped connecting lines are formed liquid tight or formed to allow liquid to pass only at a low flow rate.

13. A method according to claim 10 wherein

the threads are monofilaments or multifilaments of synthetic materials selected from the group consisting of polyester, polyaramide, other polymers, carbon and Kevlar.

14. A method according to claim 10 wherein

the threads are monofilaments or multifilaments of metal selected from the group consisting of nickel, platinum, palladium, gold, silver and stainless steel.

16. A method according to claim 10 wherein

the threads are monofilaments or multifilaments of materials selected from the group consisting of glass fibers, graphite powder and activated charcoal.

17. A method according to claim 10 wherein

adjacent transverse connections are arranged between two connecting lines enclosing an angle therebetween of 10° to 70°.

18. A method according to claim 17 wherein

the angle is approximately 30°.

19. A method according to claim 10 wherein

the tubular body is constructed with at least three connecting lines and with at least three surfaces of transverse connections on which the membrane material is applied.

20. A method according to claim 10 wherein

the tubular body is constructed with at least six connecting lines and with at least six surfaces of transverse connections on which the membrane material is applied.

21. A method according to claim 10 wherein

the tubular body is coated with a membrane-activated substance by being guided through a precipitation bath, with the membrane-activatable substance being converted into a microporous membrane layer.

22. A method according to claim 10 wherein

the membrane material is a synthetic material selected from the group consisting of polyethersulfone, polysulfone, polyacrylonitrile and polyvinylidene fluoride.

23. A tubular membrane, comprising:

a tubular body having a longitudinal axis construction from a plurality of threads with some of the threads being tied substantially firmly together along fillet-shaped connecting lines having continuous longitudinal threads parallel to the longitudinal axis and with some of the threads forming planar transverse connections extending between mutually adjacent connecting lines; and

a predefinable membrane material applied on the tubular body.

24. A tubular membrane according to claim 23 wherein passages extend between individual ones of the transverse connections for allowing liquid to pass through at high flow rates; and the fillet-shaped connecting lines are liquid tight or allow to pass only at low flow rates.

25. A tubular membrane according to claim 23 wherein the threads are monofilaments or multifilaments of synthetic materials selected from the group consisting of polyester, polyaramide, other polymers, carbon and Kevlar.

26. A tubular membrane according to claim 23 wherein the threads are monofilaments or multifilaments of metal selected from the group consisting of nickel, platinum, palladium, gold, silver and stainless steel.

28. A tubular membrane according to claim 23 wherein the threads are monofilaments or multifilaments of materials selected from the group consisting of cellulose acetate, glass fibers, graphite powder and activated charcoal.

29. A tubular membrane according to claim 23 wherein adjacent transverse connections are arranged between two connecting lines enclosing an angle therebetween of 10° to 70°.

30. A tubular membrane according to claim 29 wherein the angle is approximately 30°.

31. A tubular membrane according to claim 25 wherein  
the tubular body is constructed with at least three connecting lines and with at least three  
surfaces of transverse connections on which the membrane material is applied.

32. A tubular membrane according to claim 25 wherein  
the tubular body is constructed with at least six connecting lines and with at least six  
surfaces of transverse connections on which the membrane material is applied.

33. A tubular membrane according to claim 25 wherein  
the membrane material is a synthetic material selected from the group consisting of  
polyethersulfone, polysulfone, polyacrylonitrile and polyvinylidene fluoride.